

CLAIMS

1. An apparatus comprising:  
a polarity switch comprising a number of transmission gates, wherein an output of said polarity switch selectably presents either (i) a signal that varies in response to a control  
5 signal or (ii) a predetermined logic level that is independent of said control signal.

2. The apparatus according to claim 1, wherein said number of transmission gates is two.

3. The apparatus according to claim 1, wherein said output signal is selected in response to a first configuration signal and a second configuration signal.

4. The apparatus according to claim 1, further comprising a first storage element connected to an input of a first transmission gate and a second storage element connected to an input of a second transmission gate.

5. The apparatus according to claim 1, wherein said control signal is an input term.

6. An apparatus comprising:

a first circuit configured to present a first stored value to an input node in response to a first state of a control signal; and

a second circuit configured to present a second stored value to said input node in response to a second state of said control signal.

7. The apparatus according to claim 6, wherein said first and second circuits comprise transmission gates.

8. The apparatus according to claim 7, wherein said transmission gates comprise a CMOS transistor pair.

9. The apparatus according to claim 6, wherein said first and second circuits comprise a first and second storage element, respectively.

10. The apparatus according to claim 9, wherein said first and second storage elements contain the same or different data.

11. The apparatus according to claim 10, wherein said data comprises configuration bits.

12. The apparatus according to claim 9, wherein said first and second storage elements are configured to source or sink a current.

13. The apparatus according to claim 6, wherein said apparatus comprises a product term input circuit of a programmable logic device.

14. An AND plane of a programmable logic device comprising one or more apparatus according to claim 6.

15. The apparatus according to claim 6, wherein said control signal comprises an input term.

16. The apparatus according to claim 15, wherein said apparatus is programmed to present (i) said input term, (ii) a digital complement of said input term, or (iii) a logic level to said input node.

17. The apparatus according to claim 16, wherein said logic level is a digital 0 or 1.

18. A method for providing a product term input of a programmable logic device comprising the steps of:

(A) presenting a first stored value to an input node in response to a first state of a control signal; and

(B) presenting a second stored value to said input node in response to a second state of said control signal.

19. The method according to claim 18, wherein said control signal comprises an input term.

20. The method according to claim 18, further comprising the steps of:

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(C) generating a first logic level at said input node in response to said first and said second stored values being programmed with a first value;

(D) generating a second logic level at said input node in response to said first and said second stored values being programmed with a second value;

(E) generating a signal at said input node that has a state similar to said control signal in response to said first stored value being programmed with said first value and said second stored value being programmed with said second value; and

(F) generating a signal at said input node that has a state similar to a digital complement of said control signal in response to said first stored value being programmed with said second value and said second stored value being programmed with said first value.